

**REMARKS**

**I. Introduction**

Claims 1-5, 8 and 13 stand rejected under 35 U.S.C. § 102.

Claims 6, 7, 9, 11 and 12 stand rejected under 35 U.S.C. § 103.

Claim 10 is indicated to contain allowable subject matter.

**II. Amendments**

The title has been amended as suggested by the Office action.

Figures 15(a) and 15(b) have been amended to add the label “prior art.”

The specification has been amended to conform with the reference numbers in the drawings.

Claim 1 has been amended to more distinctly claim that which Applicant regards as their invention.

No new matter has been added by any of the above amendments.

**III. Prior Art**

A. Claims 1-5, 8 and 13 stand rejected under 35 U.S.C. § 102 as being anticipated by Dabral et al. (U.S. Pat. 6,137,143) (hereafter “Dabral”).

Anticipation under 35 U.S.C. § 102 requires that each and every element of the claim be disclosed in a prior art reference as arranged in the claim. See, *Akzo N.V. v. U.S. Int’l Trade Commission*, 808 F.2d 1471 (Fed. Cir. 1986); *Connell v. Sears, Roebuck & Co.*, 220 USPQ 193, 198 (Fed. Cir. 1983).

Dabral does not disclose a semiconductor device which comprises a first conductive type

semiconductor layer, at least one first unit cell of a first conductivity type, at least one second unit cell of a second conductivity type, and an element isolation region located between the first unit cell and the second unit cell, as recited by amended claim 1. Dabral discloses a diode with an n-type region 125 and p-type region 135 in cell units. Figs. 4 and 5, col. 5: 42-67. Dabral does not disclose to use an element isolation region between a first cell unit and a second cell unit of a diode.

Accordingly, Dabral does not disclose each and every element of amended claim 1 and hence does not anticipate amended claim 1, nor claims 2-5, 8 and 13 which depend on amended claim 1.

B. Claims 6, 7 and 12 stand rejected under 35 U.S.C. § 103 stand rejected under 35 U.S.C. § 103 as being unpatentable over Dabral in view of Koga (U.S. Pat. 5,936,265).

Obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. *Ecolochem Inc. v. Southern California Edison Co.*, 227 F.3d 1361, 56 U.S.P.Q.2d (BNA) 1065 (Fed. Cir. 2000); *In re Dembiczak*, 175 F.3d 994, 999, 50 U.S.P.Q.2D (BNA) 1614, 1617 (Fed. Cir. 1999); *In re Jones*, 958 F.2d 347, 21 U.S.P.Q.2d 1941 (Fed. Cir. 1992); and *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q.2d 1596 (Fed. Cir. 1988). See also MPEP 2143.01.

Claims 6, 7 and 12 depend on claim 1 and incorporate all of the limitations thereof. Neither Dabral nor Koga, taken alone or in combination, disclose or suggest a semiconductor device which comprises a first conductive type semiconductor layer, at least one first unit cell of

a first conductivity type, at least one second unit cell of a second conductivity type, and an element isolation region located between the first unit cell and the second unit cell, as recited by amended claim 1. Dabral does not disclose such as discussed above. Koga also does not disclose such. Koga discloses to form an element isolation region 202 around a circuit element containing a source 205b, a drain 205a and a gate electrode 204. Figs. 11A and 11B, col. 12: 30-61. Koga does not disclose a semiconductor device which includes an isolation region located between first and second cell units.

Accordingly, as neither Dabral nor Koga, take alone or in combination, disclose or suggest all of the elements of amended claim 1, the combination of Dabral and Koga does not render claims 6, 7 or 12, each of which depend on claim 1, unpatentable.

C. Claims 9 and 11 stand rejected under 35 U.S.C. § 103 stand rejected under 35 U.S.C. § 103 as being unpatentable over Dabral in view of Lee et al. (U.S. Pat. 4,884,238) (hereafter “Lee”).

Claims 9 and 11 each depend on amended claim 1 and incorporate all of the limitations thereof. Neither Dabral nor Lee, taken alone or in combination, disclose or suggest a semiconductor device which comprises a first conductive type semiconductor layer, at least one first unit cell of a first conductivity type, at least one second unit cell of a second conductivity type, and an element isolation region located between the first unit cell and the second unit cell, as recited by amended claim 1. Dabral does not disclose such as discussed above. Lee also does not disclose such. Lee discloses to form conventional pn junctions diodes 18. Fig. 2A. Lee does not disclose a semiconductor device which includes an isolation region located between first and second cell units.

Accordingly, as neither Dabral nor Lee, take alone or in combination, disclose or suggest all of the elements of amended claim 1, the combination of Dabral and Lee does not render claims 9 or 11, each of which depend on claim 1, unpatentable.

#### **IV. Conclusion**

Having fully and completely responded to the Office Action, Applicants submit that all of the claims are now in condition for allowance, an indication of which is respectfully solicited. If there are any outstanding issues that might be resolved by an interview or an Examiner's amendment, the Examiner is requested to call Applicants' attorney at the telephone number shown below.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

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**Amendment To The Drawings**

Please replace Figures 15(a) and 15(b) with the “replacement sheets” attached to a Letter To The Draftsman provided herewith. The replacement sheets add the label “Prior Art” to Figures 15(a) and 15(b).